



## PATENT ABSTRACTS OF JAPAN

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**H03M 7/30****G10L 9/18****H04N 7/24****H04N 7/30****H04N 7/32**(21) Application number: **06081534**(22) Date of filing: **20.04.94**(71) Applicant: **MATSUSHITA ELECTRIC IND CO LTD**(72) Inventor: **EITO MINORU**(54) **VECTOR QUANTIZATION CODING/DECODING DEVICE**

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(57) Abstract:

**PURPOSE:** To divide an input pattern into a vector quantization index and its differential signal to effectively transmit and record them and to sequentially optimize a vector quantization code book.

**CONSTITUTION:** A minimum distortion vector deciding part 101 outputs a key vector  $y_m$ , i.e., the minimum square error in  $y_i$  contained in a code 'book to an input 64-dimensional vector ( $x$ ) and also outputs an index ( $m$ ) of the key vector. Then the part 101 quantizes the difference vector ( $d$ ) calculated by a subtractor 1-3 as  $d=x-y_m$  through a quantizing part 104 and outputs the quantized vector ( $d$ ) together with the index data. Then a difference vector  $d'$  is calculated at an adverse quantizing part 106, and a code book changing part 107 changes the vector  $y_m$  based on the vector  $d'$  so as to approximate it to the vector ( $x$ ). Meanwhile the vector  $y_m$  is changed also at the decoding side synchronously with the coding side.

